

MANY DANGERS FACE OWNER WHO WOULD TRADE OLD CAR FOR NEW ONE

LARGE ALLOWANCE ON OLD MOTOR CAR TENDS TO MISLEAD

Shortage of New Autos Increases Price on Used Models.

DECEPTIVE OFFERS

Says Bargains Often Turn Out to Purchaser's Loss.

There is only one safe way of making a bargain when turning in a used motor car toward the purchase of a new car. And that is to be absolutely certain that you are getting a fair price for the old car and not be misled by a fictitious allowance on the old one.

If you are offered more for your old car than you know in your own mind it is actually worth just ask yourself who will pay for the extra allowance.

You cannot get something for nothing. Such a deal in connection with a motor car is just as impossible as it is with any other standard, legitimate product.

Every used car has a real value. Although the value might vary slightly according to different appraisals, it nevertheless has a definite value easily ascertained. When allowances vary widely, it is well to investigate.

It is not what you are allowed for your old car, but what you pay for the new one and the transportation value received that you should consider.

If on two cars of practically the same selling price you are offered a deal more for your used car in exchange for one than for the other, you may be sure that the two new cars are not of the same value. On close study you will not doubt find that one of the two carries a highly inflated selling price, permitting a fictitious allowance on your used car.

Ask yourself this question: What car would you purchase if you were paying all cash? What might be like a bargain on first thought often turns out to the purchaser's loss when an allowance is made above the used car's market value.

Let us be sure that the quality of the price promises is there. Study the car from every angle and compare it, point by point, with other cars similarly priced.

It is wise to do some studying and figuring yourself. Your investigation will disclose whether or not you are getting value in your new car and a fair allowance for your used car at the same time.

The used car market, like other markets, has seen many changes in the past four or five years. During the war and immediately after it, the value of used cars was greatly enhanced—not because there was anything of greater value in the car, but because of the production of new cars was far below the demand for personal transportation.

The shortage of cars made it easy to sell old cars at good prices. Demand for a time maintained the prices of new cars and with them the prices of old cars.

WASHINGTON'S STORM FIGHTERS.



One of the strong buses of the Washington Rapid Transit Company, which greatly aided snow-bound and weary pedestrians during the big snow last week to arrive home in time for supper. The men seen on the "loyal giant" worked many hours striving to clear the streets of deep snow.

BRIGHT OUTLOOK IN MOTOR WORLD FORECAST FOR 1922.

Says Sweeping Road Development Will Give Owners More Value Per Vehicle.

The year 1922 will be a year of growth. It will, one can say, be a year of expansion. By this I do not mean necessarily that there is going to be larger production. In fact, anyone who speaks of growth simply in terms of production has a very limited conception of what the industry means. Beyond a certain point essential to carry the overhead, output of new cars is secondary to other considerations.

The automobile business may fitly be compared with a young man who has been through a number of years of rapid physical development, who will also undoubtedly go on. The important thing for him, however, is not an addition to his bulk, but fuller use of the faculties with which he has been endowed. He must now add experience, judgment and creative ability to his physical size.

The production of 1921 probably will not be exceeded in 1922, but this is only one particular in the scope of motor transportation.

More attention will be paid to the needs of the individual owner. The repair parts business of the factories will be better organized. Governmental and other agencies will carry on studies of transportation costs which will effect economies. Road development will give the motorist more value per vehicle. The export market will be better. In fact, if the allied debt is refunded, foreign trade will be measurably improved, as the exchange rate will then readjust differences in currencies on a basis of comparative purchasing power.

In 1922 we are going to see better service to the individual car owner. The industry in the past

ten years has been working in the laboratory. It has been making a product new in the history of man. And it has taken time to understand not only the problems of manufacture, but also the difficulties in the repair and service shops throughout the country. Many companies are giving and have given splendid service to their owners, but for the industry as a whole there is great opportunity for growth. It is a complex situation to deal with, because good service to the owner is a matter of personal contact with the local man in the field. Fortunately, time is gradually eliminating those local shops which have not served the customer well. Time also is giving the local man a chance to know what the motorist wants. The year 1922 will give many factories an opportunity to study their service situations throughout the country and to add their local dealers in giving satisfaction to the car owner.

Concretely, this will mean that the dealers' inventories will be better balanced, so that there seldom will be delay and expense due to telegraphing the factory for parts. The owner will have a better idea of what his repairs are going to cost him. There will be increased emphasis on cleanliness and courtesy. Owners can protect themselves by patronizing authorized service stations and then if they do not get the treatment to which they feel they are entitled, they will confer a great favor on the factories by entering a vigorous protest to the home office.

Improvement in export trade became noticeable in October. In the months preceding there had been a halting of demand in foreign mar-

kets as a direct result of the disturbed economic conditions throughout the world. The lowest level for automotive exports in 1921 was reached in July, as far as commercial trucks were concerned, and in September for passenger cars. Compared with July, the truck shipments were higher by 76 per cent in October. The percentage of increase in the case of passenger cars was 6 per cent over the September exports. A still greater improvement was noticed by the trade during November. Thus it is becoming evident that the curve of export trade has turned the corner and is now gradually directed upward.

In Iceland there are no railways. Formerly the only means of communication was on Iceland ponies. Realizing the need of improved transportation facilities, the local government proceeded to improve roads and today the motor vehicle is offering to the inhabitants of the northern isle an invaluable means for the conveyance of passengers and goods.

The real cause for optimism in foreign trade may be seen in the tendency to restore world-wide confidence. With it will be restored the exchanges to such levels that the depreciated currencies will buy, if changed into dollars, practically the same quantity of goods in the United States as they do on the country of issue.

Visualizing Motor Transport.

Leading financial authorities predict a prompt recovery in the truck market with the return of better general business in the spring. The essential factors in the truck situation, however, are much wider than the extent to which motor vehicles are likely to take over the short-haul freight traffic, the railroads will probably be immediately benefited financially, because short-haul business is becoming increasingly unremunerative on account of the high proportion of terminal costs which it must sustain.

We shall find in our larger representative cities motor freight terminals exercising important influences on transportation and production. Consolidation of existing motor freight lines will be brought about in the interest of the larger terminal responsibilities to the shippers. This is already in progress in New York, Rochester, Buffalo and other cities. Safe passage of goods between cities will be guaranteed by the use of armed convoy arrangements.

Railroads Will Buy Motor Trucks. In many instances we shall undoubtedly find as time goes on that the railroads themselves will initiate the allocation of truck and freight car service. The precedent has already been established by the Cascade Railway of Washington, which was recently confronted with the problem of extending its service into undeveloped territory.

If you had the privilege of taking periodic airplane rides over the country you would find that the smoke of the short line railroads would be growing less and less apparent, due to the increased use of motor buses equipped with flanged wheels. Closer observation would reveal that the passenger-carrying traffic is being shifted to street cars and buses, as the latter have been found to make possible the extension of service into new residential and manufacturing centers.

The imminence of the realignment of transportation facilities is quite apparent. Approximately 75 per cent of the hauling in the Texas and Oklahoma oil fields is being carried on by means of specially designed truck and trailer combinations. There is every reason to believe that in the transportation of coal from the mouth of the mine there will be from now on a similar marked tendency to utilize power trucks. Just how extensive this movement will be may perhaps be gleaned from the fact that the products from approximately 3,300 mines are being conveyed by motor trucks or wagons at the present time.

With the increase in the number of good roads within the next few years there will come about a more extensive utilization of motor trucks by the farmer as the government estimates that he loses \$200,000,000 yearly in marketing his crops on account of bad roads.

Anyone who has been shaken up on bad roads or has seen a good road fallen into disrepair may look upon 1922 with enthusiasm. The Townsend act, enacted by Congress last fall, continues the usual \$100,000,000 fund for new roads. The Townsend measure, however, carries more of importance than financial aid. It specifies that the taxpayers' money be protected by a maintenance fund so that a road once built will be permanent.

NATION NOW HAS SOUND HIGHWAY POLICY TO WORK

Roads and Vehicles Perform Real Service to General Public.

By N. A. C. C.

In all the years of highway transportation development in this country 1921 stands out as the period in which there has been the most forward looking crystallization of industrial, State and national policies.

Within the short span of its days we have finally come to a realization of the fundamental fact that after all neither the highway nor the vehicle which travels over it can be considered as things apart. Today we know that each is but an aspect of highway transport, and that if it is only as the two together perform real service to the general public that either can be of lasting value. The "booster" period has passed. In the future progress in highway transport must and will be measured upon the basis of economic facts both from the standpoint of individual transportation and from the broader viewpoint of an inter-relationship of all forms of transportation.

Will Help Every One's Business.

The automotive manufacturer must recognize this as he plans his production, the automotive dealer must study and analyze it as he surveys his selling territory, the highway engineer must take it into account as he complies his estimates for highway construction and maintenance. The city planning expert must reckon with its influence as he measures the future development of his municipality. Its effect will be found in real estate valuations, in our recreational areas, in education, in every phase of life here and abroad.

In the analysis of the events which have shaped the highway transport officials of the country to these conclusions, three factors stand out in sharp relief, although none of them can be considered separately. One is the enactment of the Townsend Federal highway act of 1921, a second the progress made by the Bureau of Agriculture under the leadership of T. H. MacDonald, and in close co-operation with State highway departments, and third, the development of the work of the highway and highway transportation education committee.

A Permanent Investment.

In the passage of the amendments to the Federal aid act, the nation has been given a sound and intelligent highway policy through its recognition of the need for an adequate and connected interstate highway system, through its concentration of Federal funds upon State highway systems, and through its recognition of the need for adequate maintenance requirements and through rigid standards of construction which must be well as prevailing trade needs must be taken into account, the act marks a distinct advance over all our policies of the past.

It is necessary to a full work-out of the highway act, and appropriations, such as the five-year programme of \$100,000,000 a year for five years already before Congress and supported by a strong public opinion, that it be not only able that this will not be granted, but here there is a definite field for endeavor for all who believe in sound highway development.

Bureau of Roads a Pioneer.

The work of the Bureau of Public Roads has been of a pioneer character and has led into many and diverse fields, including physical and economic research, dissemination of highway facts and broad studies of finance administration and statistics.

Perhaps one of the most valuable studies now in progress is that of the relation of the road to the vehicle. An examination of the facts is still far from complete, but already we are gaining a new conception of those problems and one that offers distinct encouragement.

Looking back we can perceive now that while motor vehicle use began a sharp increase in 1915, which has brought the country from something more than 1,000,000 vehicles in 1915 to 10,000,000 motor vehicles in 1921, that while the curve of highway appropriations began to move upward in 1916 (when the first Federal aid act was passed) that it was not until 1920 and 1921 that the curve of actual construction and maintenance began to ascend. The causes are apparent. War needs, freight congestion, high costs of material and labor held back construction. The highways were subjected to their most intensive use at a time when maintenance was least possible.

Improved Building Methods.

In consequence public thought was led to the belief that the new form of highway transport was too heavy for our highways and immediately there followed a wave of stringent regulation.

Today the curve of construction and maintenance are beginning to catch the curves of use and appropriation, and in its ascent new encouraging facts are placed before the user of highway transport, as well as before the highway builder and the legislator. American genius is meeting modern American standards of transportation, and as it does so vexatious problems are viewed with a new sense of proportion, while it does not ally the irritating which they cause, now gives evidence that they are not final in their influence.

Meanwhile, too, the scientists of the government are searching out the underlying truths of transport. They are examining the effects of frost, of varying types of design, of traffic of many and different types. They are studying economics in an effort to balance the relation of vehicle and highway.

In all fairness it could not be said that they have arrived at final conclusions. We cannot now affirm any exact formula as to the relations mentioned; but in the thorough, practical manner these problems are being attacked all users of highway transport are justified in holding the hope of their ultimate solution.

In all of this work the bureau has had the co-operation of the highway and highway transport education committee, an organization of governmental and industrial and educational leaders formed to stimulate study of economic facts relating to highway transport in our educational institutions. Recognizing the need for trained men, this committee has set itself to the task of keeping the colleges of the country posted as to new developments in highway transport.

Sunday Auto Car Travel Greatest, Declares Bureau

If you are going on an automobile trip and want to avoid all possible traffic you should go on Tuesday or Wednesday. Such is the conclusion reached from a study of a traffic census taken recently by the Bureau of Public Roads, United States Department of Agriculture.

On one of the most traveled roads in the United States, if you want to go at an hour when there will be the least traffic, start between 2 and 3 o'clock in the morning.

Traffic increases in amount steadily from Wednesday to Saturday, the census shows, and then jumps into big volume on Sunday. The volume on Sunday is about twice that on Tuesday or Wednesday. On Monday there is a decided drop from the Sunday figures and on Tuesday the lowest ebb is reached.

There is less traffic on the road between 2 and 3 o'clock in the morning than at any other time of day. From 3 o'clock to 5 there is a slight increase; then a steady climb until 11. Between 11 o'clock and 1 there is a slight drop, and then an increase again until the peak is reached between 2 and 3. After 3 o'clock traffic drops slightly until 7 when the decrease becomes more pronounced. By midnight traffic has almost reached its lowest point.

Ninety per cent of the day's traffic, the census shows, rolls over the road between 7 a. m. and 9 p. m. and 52 per cent between 1 p. m. and 3 a. m.

BUY MOTORS FROM RELIABLE DEALERS

Many Fine Bargains to Be Had in Used Car Market.

While the average buyer is inclined to be skeptical about used cars he need not necessarily be too skeptical. There are many fine bargains to be had, and the new driver can with much advantage to himself start in with a less costly used car.

Many of the cars offered are in excellent condition. It has been said by some engineers that an automobile is in better condition after it has been driven 10,000 or 15,000 miles than it was when new. If the use it has seen has been anything like ordinary wear, however, the advantage gained through dealing with an established automobile man in the fact that the dealer is as considerate of his statements to the buyer of a used machine as he is to the man who takes a new car off his floor—possibly more so, for the new car speaks for itself.

Statements made by the reliable dealer as to the car's value may be relied upon. It may safely be assumed that he has tested the car and had it examined by experts. He knows no definite things relating to any given used car—he knows he can sell it to someone in time, and he knows the person who takes it is a prospective purchaser of another car, perhaps a more costly one, at some later date. Consequently his concern is not narrowed to the sale of the moment. This is the moral factor of the reliable dealer's position that reacts to the purchaser's benefit.

ROTTEN CYLINDERS AFFECT ALL PARTS IN MOTOR VEHICLE

Auto Running Unevenly Will Ruin Clutch and Transmission.

Experts say that the bad effects of worn cylinders are not confined to the motor. A motor, when running unevenly, will soon by its constant jerking ruin the clutch, transmission, universal joints and differential.

Taking into consideration the fact that in a medium type four-cylinder motor of five-inch stroke, running at a normal speed of twenty miles per hour, the actual travel of each piston assembly up and down the walls of the cylinder is over 600 feet per minute, therefore, it is not surprising that these parts, though made of the very best material, must eventually show wear.

Aside from the natural wear these conditions often occur in motors which are practically new, because of overheating, lack of oil or water and other reasons.

It is customary to overhaul a motor at least once a year. The valves are ground, carbon removed, bearings refitted and worn parts bushed or replaced. Adding to this an attractive coat of paint usually constitutes a general overhauling.

And, after all this, the motor does not have its old power and pep, and the reason for this is:

The cylinders, pistons and rings, the most vital and important parts, which are subjected to the most abuse and wear, and to the greatest variable heat conditions; the parts on which depend the power and snap, the consumption of oil and gasoline have been neglected and placed in the backwash.

Where is the only way to overcome this trouble? The cylinders must be reground and fitted with oversize pistons and piston rings. This important work has been greatly misconstrued and misrepresented.

There have been various inferior methods resorted to in the attempt to perform this most essential work. There is a vast difference between boring, reaming, lapping, etc., and actual cylinder grinding.

Modern mechanical principles have shown that the most practical method of performing this work is by grinding.

It is best from the beginning to place this line of work on a higher standard, to make it one of satisfaction and economy to the car owner as well as the repairman and dealer, and spare no effort or expense with that end in view.

Engineer Appointed.

Herman A. Zannoth, who has been in the employ of the Cadillac Motor Car Company for the last nineteen years, has been appointed plant engineer for the new Cadillac factory on Clark avenue, Detroit, Mich., according to an announcement made by A. L. Widman, manager of manufacturing. Mr. Zannoth was previously chief electrician.

Cold Weather Suggestions.

Use a good anti-freeze solution. Inspect steering gear and brakes. Change oil frequently in the cold.

Keep battery fully charged to avoid freezing. Cover the radiator and hood with a heavy blanket. Warm the engine before making a start, but do not race it. Attach chains carefully and properly before driving on wet and slippery streets.

Auto Car Realm Will Near Basis In Stabilization

"A development of the automobile business which 1922 will usher in is 'price stabilization,'" says H. H. Franklin, in a statement just made to dealers. "People ask, 'What is the price?' Or in other words, 'Is your price settled?' The interest is not in a lower price, necessarily, but in the assurance that their purchase be on sound footing."

"Automobile prices," Mr. Franklin continued, "are considerably under the price of commodities and raw materials. The deflation which 1921 has worked out will now take the turn to a strengthened price basis."

"Today the buying of motor cars is resolved into an investment in transportation, wherein it is not merely a question of 'going and getting back,' nor simply a consideration of a car at a price. Cost per mile considered, there is a saving with the service rendered, is more and more the measure."

AUTO CAR OUTPUT NORMAL DURING '21

One Billion and Half Automobiles Sold in United States.

Automobile production by American companies for 1921 amounted to 1,700,000 cars of which 1,550,000 were sold in the United States and the remainder in Europe. Although in point of size, this output ranks below 1917, 1918 and 1920 whose volumes were 1,868,947, 1,574,016 and 2,205,195 respectively, yet it was not below the expected normal increase.

It represents production curtailed only from the flood stage of the post-war demand to the normal level of the reconstruction period. Manufacturers have not yet found it necessary to cut down activities below what might be considered the customary market demand. Translated into time, this offers a cheerful outlook, says the Miller Rubber Company, Akron, Ohio, for a general upward trend of the business.

More than 75 per cent of all the automobiles and truck tires made in the United States during 1921 were manufactured in Akron, according to officials of that city. Ten rubber companies made 75 per cent of the nineteen million tires turned out in 1921, according to rubber experts.

An Electrical Tip.

Electrical trouble in the system does not always originate in the battery or the generator, as is generally supposed, but in wiring, switches, and lights. If these parts are neglected, difficulties in obtaining sufficient current either from the generator or battery may result.

Getting Rid of Impurities.

Before starting the engine, occasionally open the drain at the bottom of the carburetor. Water or any foreign matter will be drawn off and possible trouble averted.

Renewing Worn-Out Cylinder.

The only practical remedy for scored or worn-out cylinders is reboring. This process calls for oversize pistons and rings, to insure smooth and quiet operation and good compression of the engine.



Get Ahead With A Lightning Start

Get off with a lead at the crossing. Avoid the traffic tangle with a LIGHTNING START.

LIGHTNING'S the fuel for a quick getaway. Giant power, undiminished by carbon's brake-like clutch. Steady—hitting explosions uninterrupted by missing from fouled spark plugs.

Quickest pick-up with ready, speedy power—that's the LIGHTNING START. Do you get it? Not with ordinary gas.

LIGHTNING MOTOR FUEL has qualities unknown to ordinary gas. Be free from carbon troubles. Keep clear of spark

plug fouling. Save your battery. That's economy and motor wisdom. Get ahead with a LIGHTNING START—ahead of the crowd—and ahead in dollars, too.

Start today with LIGHTNING, the quickest way to "More M-i-l-e-s of Power!"

PENN OIL COMPANY ROSSLYN, VA. Distributors and Filling Stations for LIGHTNING, Penn Gas and Lubricating Oils EVERYWHERE. "One Near You."

More Miles of Power!

THE piston design and construction devised by Maxwell engineers practically eliminates the possibility of disagreeable and ruinous oil pumping in the New Series of the good Maxwell.

This lessens carbon formation, insuring better motor performance for longer periods of time.

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